

# Configuration manual

## PANPHONE GSM 4G/LTE



GSM 4G/LTE V7.0-01-EN

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## Warning

This document refers to the PANPHONE devices with GSM 4G/LTE telephony interface.

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Manufacturer reserves the right to modify the hardware and software described herein without prior notice. However, changes made to the hardware or software described do not necessarily render this publication invalid.



## Declaration of conformity

Panphone hereby declares that the PANPHONE products models complies with the essential requirements specified in the directive 1999/05/EC on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity

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# 1.- Introduction

Welcome to the user's network of Ciser System products.

The product you purchased is part of a range of communication systems of PANPHONE for home, offices, multifamily systems for buildings and gated communities or call to nurses in hospitals.

## 1.1.- General description

- The **Panphone GSM 4G/LTE** intercom can be used as a hands-free GSM 4G/LTE communicator, or to remotely control up to 2 relays, or to detect the activation of an alarm remotely, or in the version with Keyboard as access control by entering a password
- The Panphone GSM 4G/LTE intercom is available in 2 models:  
**GSM 4G/LTE 1 Button and GSM 4G/LTE keyboard**
- The GSM 4G/LTE 1 Button device can make calls to 9 telephone destinations sequentially. If the first stored destination does not respond, the second stored destination is called, and so on.
- The GSM 4G/LTE Keyboard device allows calls to up to 250 destinations\*.
- If a destination telephone does not answer, up to 8 telephone numbers can be indicated that will be called sequentially. If the first stored destination does not respond, the second stored destination is called, and so on.
- The GSM 4G/LTE Keyboard device can be used as an access control system. Up to 9 passwords can be memorized so that by entering a correct password from the keyboard, the door can be opened
- The maximum call establishment time is configurable (time in which the call is being signalled acoustically but the other party does not respond to it).
- Quick and easy programming. Device configuration is done by storing contacts on a SIM card, and by sending SMS messages
- **2 independently configurable relays.** They can be activated in different ways:
  - a) SMS sending*
  - b) Missed call*
  - c) By code dialing in a conversation*
  - d) Temporary activation when pressing the CALL key or call button*
- **External alarm.** SMS is sent to a fixed telephone destination indicating the alarm event (for example, to detect the opening of a door)
- SMS notification if Relay activation occurs
- **Autoresponder through whitelist.** Allows incoming calls from any number, or only from whitelisted phone numbers.
- Maximum conversation duration allowed from 10 seconds to 60 minutes.
- **Pre-recorded audios** in Spanish, Catalan, English or Portuguese (factory pre-set)

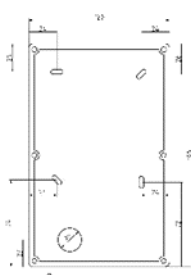
- **Possibility of activation of relay** with no economic cost, by missed call
- Possibility to check the signal level of the antenna
- The status of the relays connected to the GSM 4G/LTE panel can be known at any time by sending an SMS message
- Full Duplex Communication, with Echo Cancellation and Noise Reduction.

## 2.- Installation, connections, and location of the antenna

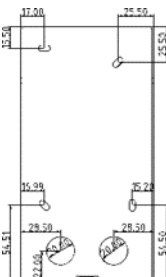
### 2.1.- Installation and mounting

Proceed with the installation of the product, according to the type of product that you acquired.

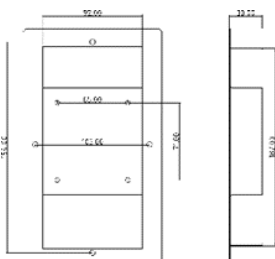
The surface devices have a back cover that will be screwed to the wall where the intercom will be installed.



Front C series



Series 4 surface



Series 4 flush mounting

#### You will need

Wall studs

Stud screws

#### Instructions:

- 1.- Take the base and mark the holes in the wall.
- 2.- Drill the right holes.
- 3.- Install the base by placing the plugs in the holes.
- 4.- Install the front panel.
- 5 Install and adjust the safety screw on the bottom of the intercom.

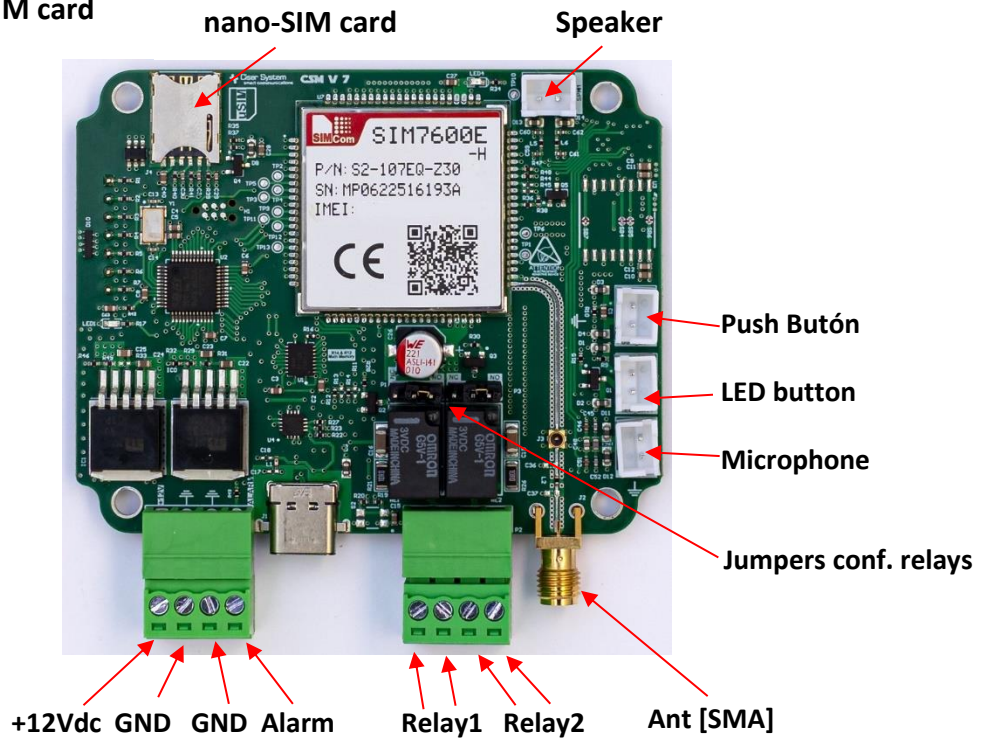
NOTE: In the recessed model, a hole of 182 x 92 mm with a depth of 30 mm shall be made.

**For more details and dimensions see mounting accessories, page 18**

## 2.2.- Connection

To make a correct connection, the following image of the electronic board is attached, in which the location of the following elements is highlighted:

- relay connector 1
- relay connector 2
- Power connector: 12V, GND
- SMA Antenna Connector
- Jumpers Normally Open, or Normally Closed
- Alarm Connector
- nano SIM card



The image shows the removable terminal blocks. The cables of the devices to be used, such as relays (right green connector), must be screwed into these connectors. In addition, in the image below, you can see the terminals to power the device and activate the alarm.

### Power supply

- Pin 1 → 12 Volts ( + )
- Pin 2 → GND ( - )

### Alarm (activates when a N.O. contact is closed P3 y P4)

- Pin 3 → GND alarm
- Pin 4 → Alarm



P1 P2 P3 P4

## **Relay connector**

When the Relay is activated, if the jumper is in the NO (Normally Open) position, the 2 pins of the terminal corresponding to the relay are joined, during the time that the relay is activated. If the jumper is in the NC (Normally Closed) position, the 2 pins of the corresponding terminal are separated during the time that the relay is activated. Important: The relays are voltage-free contacts, so they do NOT provide current to the wiring that passes through them.

In addition, the supplied **antenna** must be connected to the SMA connector and installed in a location with good coverage as it provides greater operating stability to the equipment. The distance between the antenna and the electronic board must be greater than 50 centimetres. Normally a high place without obstacles can be a good location for it. The quality of the signal can be checked by sending an SMS to the device (it will be seen later). This signal can take values from 0 to 31, where 31 is the maximum level and the one that represents the best signal quality.

**Regarding the power supply of the device, the supplied power supply must be used. If using a different source, it must be 12 Volts of direct current and at least 2 Amps. Using a source other than these specifications can damage the electronic board.**

## **3.- Programming**

The programming of the device is divided into two parts:

Pre-programming SIM card

Configuration by sending SMS messages

After doing SIM card programming, which is basically storing phone numbers in SIM card contacts, the GSM 4G/LTE intercom would be ready to use with a standard configuration, and no further programming by sending SMS messages would be required.

It is recommended to disable answering machine on the destination telephone numbers. As well as in the SIM card itself that will be housed in the Panphone intercom.

### **3.1.- - Pre-programming of the SIM card**

1. Insert SIM card into a mobile phone

2. Disable card PIN code.
3. **(1 Button GSM 4G/LTE version)** You must create contacts named **ABUTTONX** where X can be a number from 1 to 9. In 1 button devices, pressing said button calls the phone number stored in ABUTTON1. If there is no response, a call is made to the next contact, named ABUTTON2, and so on. It should be noted that these contacts must be stored as SIM card contacts.
4. **(GSM 4G/LTE KEYBOARD version)** The phone destinations you want to call must be stored as SIM card contacts. These contacts to be memorized must be written as follows: **PHONEXXX.Z** where XXX corresponds to a value between 001 and 999. Z must be between 1 and 9. It refers to the alternative telephone destinations that will be called sequentially, in the event that there is no response (It must be taken into account that a SIM card cannot store more than 250 contacts)

Example: if you want to store 3 contacts in extension or destination 150, the following contacts must be created on the SIM card, indicating in each of them the telephone number to which the call must be made.

PHONE150.1                      PHONE150.2                      PHONE150.3

If you want to store 2 contacts in extension or destination 5, PHONE005.1  
PHONE005.2

In the event that there is a gate or sentry box, (call button), you can use the contacts PHONE000.1 PHONE000.2 PHONE000.3 etc.

- 5 **(GSM 4G/LTE KEYBOARD version)** If you want to use the access control system, you must create contacts in the form **PASSWORDX** where X can be a number from 1 to 9. That is, there can be up to 9 passwords stored. They do not need to be contiguous or ordered. All passwords must be 4 numeric digits

Example: if you want to store a single password of value 1234, you must create the contact PASSWORD1 indicating the value 1234 (as if it were a telephone number).

- 6 (Optional) If you want to receive calls and apply a filter for incoming calls (White List), you must create the contacts on the SIM card in capital letters **WHITE1**, WHITE2 and so on up to WHITE9. If the filter is active, only incoming calls from those contacts will be allowed.
- 7 Although it is not essential, the contact **ADMINx** must be created as a SIM card contact. The telephone number stored in this contact is the one that will be able to make changes to the device configuration by sending SMS messages. In addition, it is to this contact that the email notifications that have been enabled will be sent. If desired, more phones can be added as an administrator by creating the contacts ADMIN2, ADMIN3, etc. (up to 9 ADMIN contacts)



## 3.2.- Configuration by sending SMS messages

- 1 Next, the SIM card, previously programmed in the GSM 4G/LTE intercom device, must be inserted
- 2 Power the unit with the attached 12 volt DC power supply provided. The POWER LED (red) should light up
- 3 After powering up the equipment, individual short beeps begin to be heard.
- 4 The device will be operational once the announcement "The device is ready" is heard (about 1,5 minutes after connecting the power supply). However, if the pre-recorded audios were not activated, 3 short beeps will be heard in a row.
5. At this time, you can send messages for your programming

**Only messages can be sent from the mobile number or numbers indicated by the contact ADMIN1, ADMIN2, etc., previously stored on the SIM card.**

Format that SMS messages must have:

W          Parameter      Numerical value

**All messages must start with W. Only capital letters can be used. Between each character or digit there must be 1 space.**

6. Once the message has been sent, if the process has been correct on the device, the announcement "Configuration message received" will be heard (if the pre-recorded audios are not activated, an acoustic signal consisting of 3 short beeps will be emitted). On the other hand, if there was an error in the message, the device will not emit a tone. Subsequently, and if the message was sent correctly, the device will reboot and the announcement "device is going to reboot" will be heard (if the pre-recorded audios are not activated, an acoustic signal will be emitted consisting of many short beeps in a row)

**W R 2 3**  
↑ ↑ ↑  
Only one space between each character

Examples of programming messages can be:

- W F 0** Disables whitelist filter. All incoming calls are allowed
- W C** Sending variables to ADMIN1
- W A 5** Sets speaker volume to a value of 3 (minimum is 1 and maximum is 5)

### 3.3.- Remote management of contacts via SMS

The equipment allows you to manage the contacts stored on the SIM card remotely through SMS messages. You can modify both the call destination contacts (ABUTTONX, PHONEXXX.Y), the whitelist (WHITEX), Access codes (PASSWORDX), and ADMIN contacts.

- 1 To add or modify a contact, you must send an SMS with the variable W, contact name and phone number separated by spaces and in quotes as in the following example:

**WWW** W "ABUTTON1" "600000000"

- 2 To read a stored contact, the parameter R and the name of the desired contact must be sent as in the following example:

**WWW** R "ABUTTON1"

The device will reply to admin1 via SMS with the information from that record.

- 3 To delete a contact, the parameter D and the name of the contact to be deleted must be sent, as in the following example:

**WWW** D "ABUTTON1"

### 3.4.- Table of commands to program via SMS

Command by SMS	Description	Default value
<b>W C</b>	<b>Sending an SMS to ADMIN that request it</b>	
<b>W A X</b>	<b>Speaker volume</b> X can be a value of 1 to 5	<b>3</b>
<b>W M X</b>	<b>Microphone level</b> X can be a value of 1 to 9	<b>5</b>
<b>W R 1 X</b>	<b>Activation of relay 1</b> X=1 the relay is activated X=2 the relay is deactivated X=3 the relay is activated for 3 seconds	
<b>W R 2 X</b>	<b>Activation of relay 2</b> X=1 the relay is activated X=2 the relay is deactivated X=3 the relay is activated for 3 seconds	
<b>W N X</b>	<b>Relay activation SMS notification (An SMS is sent to ADMIN1)</b> X=0 Is not notified X=1 Is notified	<b>0</b>
<b>W F X</b>	<b>Call filter</b> X=0 all calls are allowed	<b>1</b>

	X=1 only calls from users stored in the whitelist are allowed. WHITE1, WHITE2 ...	
<b>W U X</b>	<b>Timed activation relay 2</b> X=0 Disabled function X=1 Function activated by pressing the CALL button X=2 Function activated during conversation	<b>0</b>
<b>W T X</b>	<b>Auto-responder, activate relay by missed call</b> X = 0 All incoming calls are blocked X = 1 Immediate auto-responder X = 2 Auto-responder after 2 tones X = 3 Auto-responder after 3 tones X = 4 Auto-responder after 4 tones X = 5 Auto-responder after 5 tones X = 6 Auto-responder after 6 tones X = 7 Auto-responder after 7 tones X = 8 Every incoming call is suspended and relay 1 is activated for 3 seconds.	<b>2</b>
<b>W D X</b>	<b>Duration of conversation</b> X = 1 10 sec X = 2 30 sec X = 3 1 min X = 4 2 min X = 5 5 min X = 6 10 min X = 7 15 min X = 8 30 min X = 9 60 min	<b>3</b>
<b>W Z X</b>	<b>Alarm notification by SMS</b> X = 0 Desactivated X = 1 Activated	<b>0</b>
<b>W B X</b>	<b>Pre-recorded audio</b> X = 0 Desactivated X = 1 Activated	<b>1</b>
<b>W K X</b>	<b>Call signalling wait time</b> X = 1 Maximum time = 15 seg X = 2 Maximum time = 25 seg X = 3 Maximum time = 60 seg	<b>3</b>
<b>W V X</b>	<b>Languages</b> X= 0 Spanish X= 1 English X= 2 Catalan X= 3 Portuguese	<b>0</b>
<b>W P X</b>	<b>Update (reload) the languages</b>	

	<b>X= 1</b> Spanish <b>X= 2</b> English <b>X= 3</b> Catalan <b>X=4</b> Portuguese	
<b>W * *</b>	<b>The device is restarted</b>	
<b>W # #</b>	<b>Return the device to Factory Values</b>	

## 4.- Operating

### 4.1.-Outgoing call

**In GSM 4G/LTE 1 Button devices**, when this button is pressed, a call is made to the telephone number stored in ABUTTON1. In the case of no response (maximum time configurable with parameter K) a call is made to the next contact, named ABUTTON2, and so on. If at any time the call is answered, no more calls will be made. If any ABUTTON telephone is turned off or out of coverage, a call is made to the next stored contact.

If the button is pressed again, the current communication, if any, is interrupted and the process of making a call is repeated.

**In GSM 4G/LTE KEYBOARD devices**, the procedure to follow consists of dialing the digits of the destination to be called and then the CALL key. For example, a person wants to call extension 50, so he dials 5, then 0 and finally CALL. If you want to call extension 2, then dial 2, then CALL.

If you want to call extension 150, dial 1, then 5, then 0 and finally CALL.

If you want to call the gate or sentry box (if any), simply press the CALL key. Remember that to make use of this functionality, the contacts PHONE000.1 PHONE000.2 PHONE000.3 etc. must have been previously created.

In each destination or extension, alternative telephone numbers can be memorized, which will be called sequentially, in the event that there is no answer.

Dialing can be cancelled or restarted at any time by pressing the CANCEL key. (for keyboard models) Once in conversation, all keys except the CANCEL key are locked.

### 4.2.- Incoming call

#### **Filter calls (parameter F)**

It is possible to filter incoming calls received and only allow those whose phone numbers are stored in WHITE1, WHITE2, etc.

It is possible to store up to 9 numbers on the Whitelist contacts.

Note that this filter affects other parameters such as auto-answer.

### **Auto-answer or Hang Call (parameter T)**

If a call is received, the intercom can be configured to block all incoming calls or respond automatically. If Auto-answer is activated, in case of an incoming call, a melody or timbre is played on the intercom for about 3 seconds, and then it is automatically picked up.

If this parameter is set to 3, in the case of an incoming call, it will hang up, and relay 1 will be activated for 3 seconds. This is a way to activate relay with no economic cost.

## **4.3- Activation of the relays**

The different ways you can activate a relay are:

- By sending a text message.
- By dialing DTMF code during a conversation.
- Missed call.
- Temporary activation relay 2 by pressing CALL key or CALL button.

### **By sending a text message**

Possible messages that can be sent are the following:

W R 1 1 The relay 1 is activated  
W R 1 2 The relay 1 is deactivated  
W R 1 3 The relay 1 is activated for 3 sec.

W R 2 1 The relay 2 is activated  
W R 2 2 The relay 2 is deactivated  
W R 2 3 The relay 2 is activated for 3 sec.

Only ADMIN contacts can enable or disable the relays by SMS

### **Activation by DTMF code dialing**

During a call it is possible to activate relay by dialing a DTMF digit from the phone that is communicating with the GSM 4G/LTE intercom. The digit **8** activates relay 1, and digit **5** activates relay 2. Once the relay is activated, after a time period of 3 seconds, the relay is deactivated but the call continues established. If pre-recorded audios are enabled, a locution is heard reporting the event.

To correctly activate the relay, make sure that by pressing digit 8 or digit 5, the pulse is maintained for at least 1 second.

### **Missed call (parameter T=8)**

In the event of an incoming call, the call is suspended and relay 1 is activated for 3 seconds.

This is a way to activate the relay without economic cost.

#### **Temporary activation relay 2 by pressing CALL key / CALL button (parameter U)**

With the parameter U = 1, each time the CALL key is pressed on the keyboard version, or the button version, relay 2 remains active for 3 seconds.

If U=2 is used, relay 2 will remain active throughout the conversation.

### **4.4.- Alarm**

The device has an alarm input that can be activated with an external contact. In the event of an alarm, the device can send an SMS.

When an alarm occurs, it takes at least 30 seconds to send a second SMS, moreover, the contacts must be deactivated again before another alarm event.

By default, the SMS notification is disabled (parameter Z = 1). If activated, notification message is sent at the time the alarm event occurs.

In the image in Section 1.3, you can locate the alarm connector on the electronic board. If this alarm event is going to occur very often, it is recommended that the user have hired with their operator some flat rate SMS messages.

During the communication process (making or receiving a call), the alarm system is disabled

### **4.5.- - Status of contact of alarm via SMS**

The device allows the possibility of connecting a contact to the board, similar to push-button.

In this way, the alarm event can be notified by sending an SMS message. If the 2 wires of the alarm connector are connected, an alarm event occurs. The device responds with a SMS message with the state of the internal variables. The variable will be followed by the value 1 or 0. That is: I1 means that the two wires of the alarm contact sensor have been joined. In the case of having connected a door sensor, it would mean that the door would be closed.

On the other hand, I0 means that the 2 wires of the alarm contact are not joined. In the case of having connected a door sensor, it would mean that the door is open.

By default, the alarm notification by SMS message is disabled (Z parameter, X = 2). If this functionality is enabled, a notification SMS message is sent when the alarm event occurs. During the communication process (making or receiving a call), the alarm system is disabled

## 4.6.- Speaker and microphone levels

The speaker and microphone levels can be adjusted using the A parameter (speaker) and the M parameter (microphone). They can take values between 1 - 5 or 1-9. See table of commands, section 2.4

## 4.7.- - Pre-recorded audio and their levels

Pre-recorded audios are available in several languages.

They are very useful for signalling the status of a call.

Pre-recorded audios can be deactivated (parameter B = 0), so that a call is signalled only with single-frequency tones.

## 4.8.- - Maximum duration of the conversation

With the D parameter, you can set a maximum limit of seconds/minutes of conversation (for

both incoming and outgoing calls).

By default, the maximum conversation time is 1 minute.

## 4.9.- - Call signalling time

With the K parameter it is possible to adjust the maximum time waiting for the target phone to respond. If the waiting time is shortened, after the time set in the attempt to set up the call, the call is hung, and the next telephone destination is called. If an answering machine or similar answers, the call is considered answered and It does not continue calling the next number.

The different options are:

K = 1 Maximum set time of 15 seconds

K = 2 Maximum set time of 25 seconds

K = 3 Maximum set time of 60 seconds

## 4.10.- - Sending stored variables by SMS

With the sending of the following SMS you can receive another SMS showing the value of all configuration parameters stored in the system. In addition, other parameters such as the firmware version, or the Antenna Signal level:

**W C**

## 4.11.- - Access code and door opening by password

On keyboard devices, thanks to this functionality, you can open the door by entering a 4-digit code. The procedure would be as follows: Previously you must create the contacts of the form PASSWORDX where X can be a number from 1 to 9. That is, there can be up to 9 passwords memorized.

They do not need to be contiguous or ordered. All passwords must be 4 numeric digits. To make use of the previously defined passwords, on the keyboard you must mark the 4 digits and then press the CALL key.

At any time, you can override or restart the dialing by pressing the CANCEL key.

## 5.- - Interpretation of acoustic and light signals

To identify possible failures or errors, the device displays acoustic and light signals.

### 5.1.- Light signals, LEDs

Led Application (**blue**) Constantly on during a call, either incoming or outgoing  
Brief flashes in the startup sequence.

Mobile Network Led (**yellow**). Useful to know if the device is connected to the mobile network. Flashing indicates that you are connected or registered to the mobile network. If it is permanently on, the SIM card, the antenna or coverage problems in the installation area should be checked.

### 5.2.- Acoustic signals

When switching on the device, different individual short beeps will be emitted from time to time. The intercom will be operational once the voice "The device is ready" is heard about 1 minute after switching on the equipment. If the pre-recorded audios are not active, you will hear 3 short beeps in a row.

When sending a configuration message, if the process has been successful, the "Received Configuration Message" will be heard and then "the device will reboot" to indicate that the device will reboot. If the pre-recorded audios are not active, 3 short beeps are heard in a row, and several short beeps to indicate that the device will reboot.



When a call is received, is possible to emit a melody for about 3 seconds or according to the time chosen (parameter T).

A long beep is heard at the press of a button, followed by the "making call" speech. When receiving the DTMF signal, the frequency corresponding to the DTMF tone is heard. Then the locution "door open" is heard.

## 6.- Technical specifications

Dimension (surface)	185 mm x 105 mm x 31 mm
Dimension (embedding)	216 mm x 128 mm x 8
Temperature	-10°C a +50 °C
Humidity	10% hasta 80%
Power Supply	12 Vdc, 2 A
Current: nominal/inrush	250 ± 100 mA/ 2A
Button	1 button or keyboard
Relays	2
Relays ratings	2A 24Vdc / 2A 120 Vac
Audio output power	1W max.
GSM net	GSM, WCDMA, LTE-TDD and LTE-FDD
SIM	3V, 1.8 V

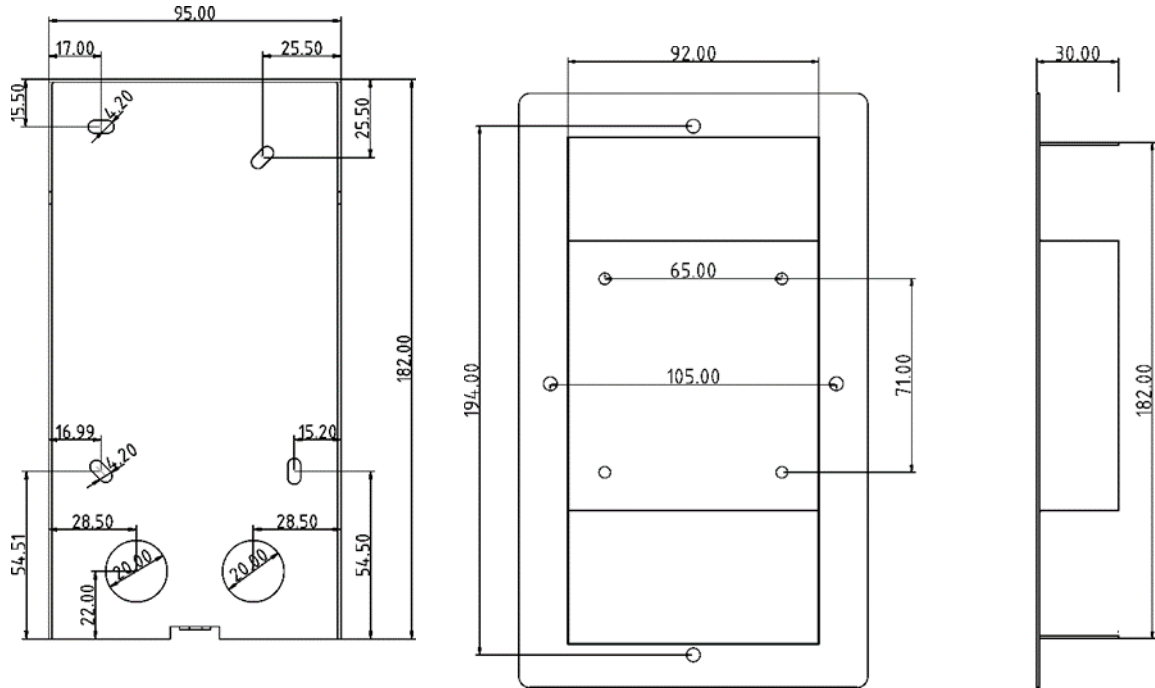
Works in the GSM bands:: B8 (900 Mhz) y B3 (1800 Mhz)

In the band of WCDMA (3G): B1 (2100); B8 (900); B5 (850)

In 4G/LTE cat 4: B1 (FDD 2100); B3 (FDD 1800); B5 (FDD 850); B7 (FDD 2600); B8 (FDD 900); B20 (FDD 800DD); B38 (TDD 2600); B40 (TDD 2300) y B41 (TDD 2500)

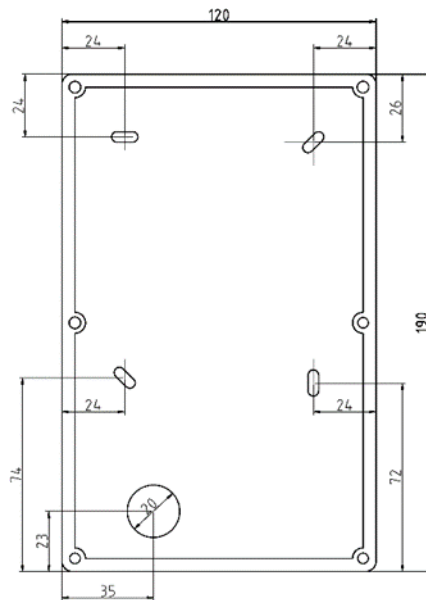
## 7.- Mounting accessories

Frame and covers for mounting  
(All measurements in mm)



SERIES 4 SURFACE  
BACK COVER

SERIES 4 FOR FLUSH MOUNTING  
FRAME



SERIES C, BACK COVER